

Appl. No. 10/681,399
Reply to Examiner's Action dated November 29, 2005

REMARKS/ARGUMENTS

The Applicants have carefully considered this application in connection with the Examiner's Action and respectfully request reconsideration of this application in view of the foregoing amendment and the following remarks.

The Applicants originally submitted Claims 1-23 in the application. In a previous response to a restriction requirement, the Applicants elected Claims 1-19. In yet another previous response, the Applicants cancelled Claims 20-23 without prejudice or disclaimer, as well as added new Claims 24-27. Presently, the Applicants have amended Claims 1, 12, 24 and 26. No other claims have currently been amended, cancelled nor added. Accordingly, Claims 1-19 and 24-27 are currently pending in the application.

I. Rejection of Claims 1, 3, 24, and 25 under 35 U.S.C. §102

The Examiner has rejected Claims 1, 3, 24, and 25 under 35 U.S.C. §102(b) as being anticipated by U.S. Pub. No. 2004/0033647 to Kim ("Kim"). Independent Claim 1 currently includes the element of depositing an oxide material over the gate, as well as over the semiconductor substrate and on a side of the gate, the opposing side surfaces of the gate being substantially free of the oxide material. Kim fails to disclose this element.

Kim is directed to a method for fabricating a SRAM cell. (Title). Kim discloses that an oxide layer 5 is grown on an upper surface of a patterned gate electrode 3a. Specifically, Kim discloses that in an ion implantation process for forming a highly doped region and a lightly doped drain (LDD) region, an oxide film 5 is formed on the undoped polysilicon layer 3 according to an

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oxidation process in order to minimize damage of the active regions of the semiconductor substrate. Here, the oxide film 5 is unevenly grown at a thickness of 400 to 500 angstroms, which is three or four times as thick as the thickness of an oxide film grown by using a general polysilicon oxidation process. (See, Kim at paragraph [0018]). Accordingly, Kim discloses growing the oxide film 5, as opposed to depositing it as claimed.

Therefore, Kim does not disclose each and every element of the claimed invention and as such, is not an anticipating reference. Because Claims 2-3, 24 and 25 are dependent upon Claim 1, Kim also cannot be an anticipating reference for Claims 2-3, 24 and 25. Accordingly, the Applicants respectfully request the Examiner to withdraw the §102 rejection with respect to these Claims.

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II. Rejection of Claim 7 under 35 U.S.C. §103

The Examiner has rejected Claim 7 under 35 U.S.C. §103(a) as being unpatentable over Kim as applied to Claim 1 above, and further in view of U.S. Patent No. 5,457,061 to Hong, *et al.* ("Hong"). As previously noted, independent Claim 1 currently includes the element of depositing an oxide material over the gate, as well as over the semiconductor substrate and on a side of the gate, the opposing side surfaces of the gate being substantially free of the oxide material. As previously established, Kim fails to disclose this element. Kim further fails to suggest this element. Specifically, Kim fails to suggest this element because Kim focuses on the specifics of growing the oxide layer 5, as opposed to depositing the oxide layer 5. Namely, Kim goes into great detail regarding the particular type of growth that is required to grow the appropriate oxide layer 5. Accordingly, there is no suggestion in Kim to deposit the oxide layer, as is presently claimed. Therefore, Kim fails to both teach or suggest the aforementioned claim element.

Hong fails to correct the deficiencies of Kim. The Examiner is offering Hong for the sole proposition that the oxide layer 5 of Kim may comprise SiO₂. Without even addressing whether the Examiner's proposition is accurate, a teaching or suggestion that the oxide layer 5 of Kim may comprise SiO₂ is very different from a teaching or suggestion of depositing an oxide material over the gate, as well as over the semiconductor substrate and on a side of the gate, the opposing side surfaces of the gate being substantially free of the oxide material, as is presently claimed. Accordingly, Hong also fails to teach or suggest this claimed element.

Therefore, Kim, individually or in combination with Hong, fails to teach or suggest the invention recited in independent Claim 1 and its dependent claims, when considered as a whole.

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Accordingly, the combination fails to establish a prima facie case of obviousness with respect to these claims. Claim 7 is therefore not obvious in view of Kim and Hong.

In view of the foregoing remarks, the cited references do not support the Examiner's rejection of Claim 7 under 35 U.S.C. §103(a). The Applicants therefore respectfully request the Examiner withdraw the rejection.

III. Rejection of Claims 8-13, 16-19 and 26-27 under 35 U.S.C. §103

The Examiner has rejected Claims 8-13, 16-19 and 26-27 under 35 U.S.C. §103(a) as being unpatentable over Hong in view of Kim. As previously noted, independent Claims 1 and 12 currently include the element of depositing an oxide material over the gate, as well as over the semiconductor substrate and on a side of the gate, the opposing side surfaces of the gate being substantially free of the oxide material. As previously established, Kim fails to teach or suggest this element. Hong also fails to teach or suggest this element. Without other, the Examiner acquiesces that Hong fails to teach or suggest such an element. Specifically, the Examiner acquiesces that "Hong does not disclose depositing an oxide material over the gate". (See, the Examiner's Action dated November 29, 2005, page 4, the fourth full paragraph). Accordingly, each of Kim and Hong, alone, fails to teach or suggest the aforementioned claimed element.

Therefore, Hong, individually or in combination with Kim, fails to teach or suggest the invention recited in independent Claims 1 and 12 and their dependent claims, when considered as a whole. Accordingly, the combination fails to establish a prima facie case of obviousness with

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respect to these claims. Claims 8-13, 16-19 and 26-27 are therefore not obvious in view of Hong and Kim.

In view of the foregoing remarks, the cited references do not support the Examiner's rejection of Claims 8-13, 16-19 and 26-27 under 35 U.S.C. §103(a). The Applicants therefore respectfully request the Examiner withdraw the rejection.

IV. Rejection of Claims 4-6, 14 and 15 under 35 U.S.C. §103

The Examiner has rejected Claims 4-6, 14 and 15 under 35 U.S.C. §103(a) as being unpatentable over Kim, and Hong in view of Kim, in case of Claims 14 and 15, as applied to Claims 1 and 12 above, and further in view of U.S. Patent No. 6,303,490 to Jeng ("Jeng"). As previously noted, independent Claims 1 and 12 currently include the element of depositing an oxide material over the gate, as well as over the semiconductor substrate and on a side of the gate, the opposing side surfaces of the gate being substantially free of the oxide material. As previously established, Kim and Hong, alone or in combination, fail to teach or suggest this element.

Jeng fails to correct the deficiencies of Kim. The Examiner is offering Jeng for the sole proposition that the oxide layer may be deposited by an anisotropic Physical Vapor Deposition (PVD) process, which comprises one of collimated sputtering, long throw sputtering or ionized metal plasma sputtering. Without even addressing whether the Examiner's proposition is accurate, a teaching or suggestion of depositing the oxide layer using an anisotropic PVD process is entirely different from a teaching or suggestion of depositing an oxide material over the gate, as well as over the semiconductor substrate and on a side of the gate, the opposing side surfaces of the gate being

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substantially free of the oxide material, as is presently claimed. Accordingly, Jeng also fails to teach or suggest this claimed element.

Therefore, Hong, individually or in combination with Kim or Jeng, fails to teach or suggest the invention recited in independent Claims 1 and 12 and their dependent claims, when considered as a whole. Accordingly, the combination fails to establish a prima facie case of obviousness with respect to these claims. Claims 4-6, 14 and 15 are therefore not obvious in view of Hong, Kim and Jeng.

In view of the foregoing remarks, the cited references do not support the Examiner's rejection of Claims 4-6, 14 and 15 under 35 U.S.C. §103(a). The Applicants therefore respectfully request the Examiner withdraw the rejection.

V. Amendments to Claims

The Applicants wish to point out to the Examiner that they have made various clarifying amendments to Claims 1, 12, 24 and 26 of the instant application. While the amendments were made, they were not made to argue around the cited references, and moreover were not needed for such. Namely, the already pending claims included the element of depositing the oxide layer, which as established above the cited references lacked. That being said, the Examiner would have already been obligated to do a new search to find new art, even if the claims were not amended. Accordingly, the amending of the claims did not necessitate a new search, and thus cannot be used in making the following Examiner's Action final.

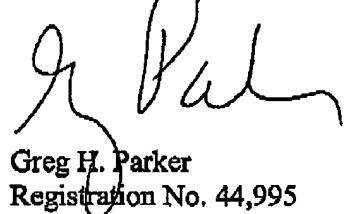
VI. Conclusion

In view of the foregoing amendment and remarks, the Applicant now sees all of the Claims currently pending in this application to be in condition for allowance and therefore earnestly solicits a Notice of Allowance for Claims 1-19 and 24-27.

The Applicant requests the Examiner to telephone the undersigned attorney of record at (972) 480-8800 if such would further or expedite the prosecution of the present application. The Commissioner is hereby authorized to charge any fees, credits or overpayments to Deposit Account 20-0668.

Respectfully submitted,

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